

the lateral prolongations occasionally produced by *C. rhizophyllus*, and well illustrated in Eaton's *Ferns of North America*. In *C. Sibiricus* both the auricles and the lateral developments are wanting, and the greatest breadth is still farther from the base of the blade. The character of the axial bundle is very marked, and should not be disregarded.—J. C. ARTHUR.

EXPLANATION OF PLATE III.—An entire plant of natural size showing four sterile fronds and a small fertile frond.

A single fertile frond of natural size with a plantlet growing from the apex.

Portion of the same frond enlarged six diameters, showing the venation and position of the sori.

Cross-section of a fertile stipe magnified thirty-five diameters, and drawn with camera lucida.

Notes on the Virginia Creeper.

A number of years ago I communicated to the *Academy of Natural Sciences of Philadelphia* the fact that every third node had one tendril, and that the leaves opposite the tendrils had no axillary buds. About the time of the publication of my remarks I twitted in pleasant vein the author of "*How plants Behave*," with inaccuracy, because the cut at p. 17 had an axillary bud opposite to a tendril. To my amazed discomfiture he replied by sending me a fresh specimen just like his drawing! It was a good lesson to me on the use of "never" by a botanist. I have since seen such cases, but very seldom. The rule is as I then noted. In the Japan species, *Ampelopsis tricuspidata* (*A. Veitchii* of gardens), the rule is the same. Mohr, a German writer on the grape vine notes that there are regular intermissions of tendrils in the grape vine, and Dr. Engelmann since, but I believe quite independently, observed the same, and at one time believed the fact might be made of value in the diagnosis of species. Much does not seem to have been made of it however in this direction. In the grape there is not the same constancy in the numerical order as in the Virginia Creeper. In *Vitis indicisa* I find a tendril at every node. In other species of *Vitis* and *Ampelopsis*, there are irregularities.

It is worth noting how *Ampelopsis quinquefolia* varies. In 1871 and '73 I collected it in the vicinity of Pike's Peak with narrow, lacinate, and somewhat glaucous leaves. Mr. Buckley notes it in Texas as often bearing seven leaflets, where it is his *A. heptaphylla*. In Canada I find six leaflets common, with often the rudiments of a seventh. In the upper Delaware regions I have often gathered them with but three. In Pennsylvania the chief veins diverge and curve as they approach the margin. At Niagara I found them as nearly parallel and straight as in a horse chestnut. A first glance at one on Goat Island once, as it ran over a tree, gave me a pleasant surprise that I was looking at an *Aesculus*.

Some years ago a large *Ampelopsis* covered a *Cerasus serotina*

on my grounds. The cherry died, and in a few years the bark and wood rotted. Where this occurred the old stem of the Virginia Creeper commenced to send out rootlets. These rootlets seem to die annually, as they do in *Rhus radicans*. The main stem is a mass of rootlets. I have observed that the plant does this sometimes in the shade on stone walls, and at times when there is not so much shade. Perhaps some plants or some forms may have a greater tendency to root than others.

Another curious thing is that when the Virginia Creeper sends out these aerial rootlets, the wood has excentric circles, as the poison vine always has.

A matter which has interested me is the manner in which the branchlets disarticulate in the fall of the year. When a Virginia Creeper reaches the top of its support, it sends out weak laterals. In the fall these are all thrown off down to the lowermost bud. In other words the lateral branches increase only by the addition of one node a year. Remembering however the above cited tilt with the author of "*How plants Behave*" I must protect myself by remarking that though I say "these are all thrown off," I should not be surprised if some one were to show me a case where it is not so.

These observations have been recorded from time to time as made, in the Proceedings of the Philadelphia Academy. As recent attention has been drawn to the plant, it may be useful to present all in one chapter.—THOMAS MEEHAN.

Plants of Belle Isle, Michigan.

Detroit, the most beautiful city of the West, has the honor of possessing what will some day be one of the most delightful parks. It is the Belle Isle, situated a few miles up the river and connected by constantly going steamers with the wharves of the city. It is still in an almost primitive condition and certainly must be a treasure to the botanists of Detroit, affording a vegetation at once varied and quite free from the introductions that attend the progress of civilization. This is the locality from which Bigelow obtained his specimens.

A few steps from the landing at the island, *Lythrum alatum*, *Potentilla Anserina*, and *Lathyrus paluster* were growing abundantly. A few rods beyond the bath houses *Habenaria leucophara* everywhere threw out its spikes of fringed flowers from among the grasses. *Rubus occidentalis* appeared, this time with an amber colored fruit, escaping the attention of groups of children busy in collecting the more common black variety. *Rosa setigera* was constantly in demand for the rural bouquets of excursionists, which seemed to have no definite size, but always had room for one more *Habenaria*, *Lysimachia stricta*, *Lobelia spicata*, or *Hypericum perforatum*. On the drier ground we saw *Geum strictum*, *Lobelia in-*